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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/058,047	01/29/2002	Guillaume Belrose	1509-256	3651
22879	7590	03/23/2006	EXAMINER	
HEWLETT PACKARD COMPANY P O BOX 272400, 3404 E. HARMONY ROAD INTELLECTUAL PROPERTY ADMINISTRATION FORT COLLINS, CO 80527-2400			PENDLETON, BRIAN T	
			ART UNIT	PAPER NUMBER
			2615	

DATE MAILED: 03/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/058,047

Applicant(s)

BELROSE ET AL.

Examiner

Brian T. Pendleton

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 January 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-49 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-41 is/are rejected.
- 7) ☒ Claim(s) 42-49 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

Applicant's arguments filed 1/5/06 have been fully considered but they are not persuasive. Applicant argues that Zwern does not disclose varying an offset between audio field reference relative to which sound sources are located in the audio field and a presentation reference. Examiner disagrees with that characterization. Specifically, the fact that there exists spatial audio in a virtual reality environment in the reference is evidence enough that an offset between the audio field reference and a presentation reference is varied in response to head movement. Applicant also argues that Zwern does not disclose visually indicating the audio field reference relative to a predetermined indicator reference. Examiner respectfully disagrees and points to cursor 22 which is a visual indicator of the audio field reference, the indicator reference between the screen itself.

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-5, 7, 13-16, 18-20, 21, 24, 25, 33-39 and 41 are rejected under 35 U.S.C. 102(e) as being anticipated by Zwern, US Patent Application Publication 2001/0038378. Zwern discloses a game display virtual reality apparatus comprising computer 12, head mounted display 26, pointing device 16, headtracker 28 and viewport 22. The viewport 22 moves with the head movement of the user. There is provided spatialized audio which reads on “varying an offset between audio field reference relative to which sound ousrces are located in the audio field and a presentation reference”. The viewport 22 has a cursor which visually indicates the orientation of the audio field reference relative to a predetermined indicator reference.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 4, 20 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jacknin et al, US Patent 5,854,843 in view of Foxlin, US Patent Application Publication

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2002/0024675. Jacknin discloses a virtual navigator comprising a sensor system 318, data acquisition system 317, and audio synthesizer 340 for spatializing audio in a virtual audio field and rendering the audio to headphones 412. The virtual audio field is updated according to the orientation of the listener's head as determined by sensor system 318. Hence, Jacknin discloses varying an offset between an audio field reference relative to which sound sources are located in an audio field and a presentation reference determined by a mounting configuration of audio output devices through which the sound sources are synthesized. Jacknin also suggests that the virtual navigator system can be used in virtual reality applications. Jacknin does not disclose determining and visually indicating the orientation of the audio field reference relative to a predetermined indicator reference. However, that feature is well known in the field of virtual reality. Foxlin, which is directed to virtual reality, discloses in figure 4 a virtual reality visual scene of a cockpit which visually indicates the orientation of the visual field relative an indicator reference. It would have been obvious to one of ordinary skill in the art at the time of invention to modify Jacknin to include the virtual reality scene, as taught by Foxlin for the purpose of increasing the realism of the virtual navigator. Claim 1 is met. Accordingly, method claim 20 and apparatus claim 35 are also met. Regarding claim 4, Jacknin discloses an apparatus which is body stabilized.

Claims 6, 8-12, 22, 23, 26-32, 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zwern in view of Anderson, US Patent 6,906,700. Zwern does not disclose a trackball for the mouse 16. However, as evidenced by Anderson, it was well known in the art of virtual reality to have a trackball for the purpose of rotating a user's view. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Zwern as

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taught by Anderson to increase the versatility of environment navigation. Regarding the limitations of a display or indicator arrangement incorporated in the trackball (input device), Examiner takes Official Notice that pointing devices with indication means for indicating how the device is being directed were well known at the time of invention and one of ordinary skill in the art would have known their benefits with regard to virtual reality and motivated to provide such means.

Allowable Subject Matter

Claims 42-49 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian T. Pendleton whose telephone number is (571) 272-7527. The examiner can normally be reached on M-F 7-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian Chin can be reached on (571) 272-7848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

btp



BRIAN TYRONE PENDLETON
PRIMARY EXAMINER